

--24. A method of detecting the presence of antibodies to Mycobacterium in a biological sample, said method comprising:

combining said sample with a protein having the amino acid sequence of SEQ ID NO:2, a homolog thereof or an antigenic determinant thereof; and detecting antibodies bound to said protein.

25. The method of Claim 24, wherein said Mycobacterium is selected from the group consisting of *M. bovis*, *M. tuberculosis*, *M. leprae*, *M. africanum*, *M. microti*, *M. avium*, *M. intracellulare* and *M. scrofulaceum*.

26. The method of Claim 24, wherein said protein is immobilized on a solid support.

27. The method of Claim 26, wherein said solid support is nitrocellulose.

28. The method of Claim 24, wherein said sample comprises one or more of sputum, blood, and serum.

29. The method of Claim 24, wherein said detecting is by a qualitative detection system.

30. The method of Claim 29, wherein said qualitative detection system is a horseradish peroxidase-protein A detection system.

31. The method of Claim 24, wherein said detecting is by a quantitative detection system.

32. The method of Claim 31, wherein said quantitative detection system is a radioimmunoassay.

33. The method of Claim 24, further comprising:
combining a control biological sample with said protein; and
comparing the detection of said binding to the binding of antibodies in the control sample with said protein.

34. A method of detecting the presence of Mycobacterial nucleic acid in a sample, said method comprising:

combining a nucleic acid sample with a probe nucleic acid which hybridizes with the sequence of SEQ ID NO:1 or its complement; and
detecting nucleic acid hybridized with said probe.

35. The method of Claim 34, wherein said Mycobacterium is selected from the group consisting of *M. bovis*, *M. tuberculosis*, *M. leprae*, *M. africanum*, *M. microti*, *M. avium*, *M. intracellulare* and *M. scrofulaceum*.

36. The method of Claim 34, wherein said sample comprises mammalian cells and/or body fluid.

37. The method of Claim 34, wherein said probe nucleic acid hybridizes with single 3.25 kb BamH I fragments from *M. bovis* BCG and *M. tuberculosis* H37Rv DNA, but not BamH I-digested DA from either *M. smegmatis* or *M. vaccae*.

38. The method of Claim 34, wherein said detecting is by Southern Blot.

39. The method of Claim 34, wherein said Mycobacterial nucleic acid is amplified by Polymerase Chain Reaction.

40. The method of Claim 39, wherein said amplification uses primers derived from the sequence of SEQ ID NO:1 or homolog thereof.

41. A method of detecting the presence of Mycobacterium in a biological sample, said method comprising;

lysing the cells in said sample;
combining said lysate with antibodies to a protein having the amino acid sequence of SEQ ID NO:2 or an antigenic determinant thereof; and
detecting said antibodies bound to protein in said lysate.